Textbook Alignment to the Utah Core – Pre-Algebra

This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) ***Yes _____ No _____***

Name of Company and Individual Conducting Alignment: _____

A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):

☐ **On record with the USOE.**

☐ **The "Credential Sheet" is attached to this alignment.**

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Pre-Algebra Core Curriculum

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Title: Middle School Math, Course 3 ©2007 **ISBN#: SE:** 978-0-618-61071-6 **TE:** 978-0-618-63822-2

Publisher: McDougal Littell

Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: 100 %

Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: N/A %

STANDARD I: Students will expand number sense to understand, perform operations and solve problems with rational numbers.				
Percentage of coverage in the *student and teacher edition* for Standard I: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 1.1: Compute fluently with understanding and make reasonable estimates with rational numbers.				
a.	Compute fluently using all four operations with integers, and explain why the corresponding algorithms work.	**SE/TE:** 62, 63-65, 65-67, 68-69, 70-72, 73-74, 75-76, 77-78, 79-81, 87, 92, 99-100, 103-105, 107, 110-111, 147, 153, 217, 232, 237, 242, 802		
b.	Compute fluently using all four operations with rational numbers, including negative fractions and decimals, and explain why the corresponding algorithms work.	**SE/TE:** 1, 2, 11, 18, 76, 121, 232, 233-234, 235-237, 238-239, 240-242, 243-244, 245-246, 247-248, 249-252, 254, 260-262, 262-264, 265-266, 267-269, 278, 279, 280-284, 285, 286-287, 288-289, 302, 341, 353, 358, 364, 369, 689, 764, 765, 768, 769, 770, 772, 805		
c.	Check the reasonableness of results using estimation.	**SE/TE:** 239, 248, 265-266, 267-268, 312, 315-316, 344, 375, 563		

Objective 1.2: Analyze relationships among rational numbers, including negative rational numbers and operations involving these numbers.				
a.	Order rational numbers in various forms, including scientific notation (positive and negative exponents), and place numbers on a number line.	**SE/TE:** 2, 57, 60-61, 67, 102-103, 107, 199, 200, 215-217, 219, 223, 256, 257-258, 269, 342, 361, 361-364, 802		
b.	Predict the effect of operating with fractions, decimals, percents and integers as an increase or a decrease of the original value.	**SE/TE:** 288-289, 366-367, 368-369, 374, 379, 386, 391, 393, 396-397, 424, 807		
c.	Recognize and use the identity properties of addition and multiplication, the multiplicative property of zero, the commutative and associative properties of addition and multiplication, and the distributive property of multiplication over addition.	**SE/TE:** 64-65, 65-66, 74, 83-85, 85-87, 88-89, 90-92, 100, 101, 105-106, 107, 110-111, 720, 726-727, 731, 802, 817		
d.	Recognize and use the inverse operations of adding and subtracting a fixed number, multiplying and dividing by a fixed number, and computing squares of whole numbers and taking square roots of perfect squares.	**SE/TE:** 33, 34-35, 64-65, 110-111, 119-121, 122, 124-125, 161, 469-470, 472-474, 509, 817		

Objective 1.3: Solve problems involving rational numbers using addition, subtraction, multiplication and division.				
a.	Recognize the absolute value of a rational number as its distance from zero.	**SE/TE:** 58, 59-60, 75, 81, 102-106, 107, 802		
b.	Simplify numerical expressions, including those with whole number exponents and absolute values, using the order of operations.	**SE/TE:** 8-9, 10-11, 12, 18, 19-20, 21-24, 25, 43, 46-47, 49, 52-53, 56, 65-67, 72, 79, 82, 87, 92, 93, 100, 101, 107, 114, 174, 191, 208-209, 210-211, 217, 224, 225, 235-236, 264, 466, 468, 714, 801, 802, 804, 818, 819		
c.	Solve problems involving rational numbers, percents and proportions.	**SE/TE:** 219, 269, 345-346, 348-349, 350-353, 354-355, 356-358, 364, 365, 366-367, 368-369, 370-372, 372-374, 375-376, 377-379, 386, 387, 389-392, 393, 394-395, 396-397, 415, 424, 432, 438, 444, 807		

STANDARD II: Students will use proportion and similarity to solve problems.				
Percentage of coverage in the *student and teacher edition* for Standard II: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 2.1: Model and illustrate meanings of ratios, percents and decimals.				
a.	Compare ratios to determine if they are equivalent.	**SE/TE:** 345, 379		
b.	Compare ratios using the unit rate.	**SE/TE:** 92, 346		
c.	Represent percents as ratios based on 100 and decimals as ratios based on powers of ten.	**SE/TE:** 256-258, 278, 283, 285, 354, 358, 359-360, 388, 633, 805, 820		
d.	Graph proportional relationships and identify the unit rate as the slope of the related line.	**SE/TE:** 618		

Objective 2.2: Solve a wide variety of problems using ratios and proportional reasoning.				
a.	Set up and solve problems involving proportional reasoning using variables.	**SE/TE:** 348-349, 350-353, 354-355, 356-358, 364, 365, 374, 389-390, 393, 396-397, 402, 444, 658, 807		
b.	Solve percent problems, including problems involving discounts, interest, taxes, tips and percent increase or decrease.	**SE/TE:** 364, 365, 366-367, 368-369, 370-372, 372-374, 376, 377-379, 386, 387, 391-392, 393, 394-395, 396-397, 415, 424, 506, 807, 816		
c.	Solve ratio and rate problems using informal methods.	**SE/TE:** 343-344, 345-346, 353, 364, 388-389, 393, 396-397, 497, 763, 807		
Objective 2.3: Recognize similar polygons and use properties of similar triangles to solve problems and define the slope of a line.				
a.	Define similar polygons as polygons with corresponding angles congruent and corresponding sides that are proportional.	**SE/TE:** 447-448, 450-452		
b.	Identify pairs of similar triangles using two pairs of congruent angles, or two pairs of proportional sides with congruent included angles.	**SE/TE:** 447-448, 450-452, 464-465		
c.	Find missing lengths of similar triangles, including inaccessible lengths, using proportions.	**SE/TE:** 447-449, 450-454, 460, 461, 462-463, 486, 808		
d.	Define the slope of a line as the ratio of the vertical change to the horizontal change between two points, and show that the slope is constant using similarity of right triangles.	**SE/TE:** 612, 616-617, 636-640, 641, 811		

STANDARD III: Students will develop fluency with the language and operations of algebra to analyze and represent relationships.				
Percentage of coverage in the *student and teacher edition* for Standard III: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 3.1: Generalize and express patterns using algebraic expressions.				
a.	Compare representations of a relation using tables, graphs, algebraic symbols and mathematical rules.	**SE/TE:** 37, 267		
b.	Describe simple patterns using a mathematical rule or algebraic expression.	**SE/TE:** 22, 40, 75, 584-587, 596, 601, 605, 624-625, 636-637, 641, 644, 811		
c.	Create and extend simple numerical and visual patterns.	**SE/TE:** 36, 40, 75, 195-196, 240		

Objective 3.2: Evaluate, simplify and solve algebraic expressions, equations and inequalities.				
a.	Evaluate algebraic expressions, including those with whole number exponents, when given values for the variable(s).	**SE/TE:** 13-15, 15-18, 20, 21-24, 30, 46, 50-51, 52-53, 56, 61, 69, 70, 74, 75-76, 78, 79, 81, 104, 107, 110-111, 147, 172-173, 189, 204-206, 209, 210, 225, 244, 245, 264, 438, 472-473, 474, 477-480, 497, 510, 609, 718, 802, 804		
b.	Simplify algebraic expressions using the order of operations, algebraic properties and exponent rules.	**SE/TE:** 20, 21-22, 24, 25, 30, 43, 46-47, 56, 79, 85-86, 89-90, 90-92, 99-100, 101, 106, 107, 110-111, 139, 174, 196, 203-204, 204-207, 210-211, 214-217, 223-224, 225, 235-236, 252, 264, 292, 715, 716, 719-720, 725, 726-728, 728-731, 738, 748-749, 751, 754-755, 801, 802, 804, 813		
c.	Solve single-variable linear equations and inequalities, including those that must be simplified on one side or those with variables on both sides of an equation.	**SE/TE:** 115, 116, 117-118, 119-121, 122-123, 124-126, 127-128, 129-130, 131-133, 134-135, 136-139, 140, 141, 143-144, 145-146, 149-150, 150-153, 154-155, 156-159, 160, 161-164, 165, 166-167, 168-169, 174, 185, 217, 261, 262-263, 278, 288-289, 292, 293-295, 295-297, 298-300, 300-302, 303-304, 305-308, 309, 314, 317, 318-319, 320-322, 323, 324-326, 326-329, 330, 331-334, 335, 336-337, 338-339, 342, 346, 369, 374, 379, 580, 582, 592, 617, 626, 745, 803, 806		

Objective 3.3: Represent relationships using graphs, tables and other models.				
a.	Identify approximate rational coordinates when given the graph of a point on a rectangular coordinate system.	**SE/TE:** 94, 96-97, 99-100, 106, 110, 433-434, 438, 582, 756		
b.	Graph ordered pairs of rational numbers on a rectangular coordinate system.	**SE/TE:** 95, 96-99, 106, 107, 111, 121, 432, 433-434, 435, 582, 590-592, 597, 598-599, 601-603, 605, 802, 811		
c.	Graph linear equations using ordered pairs or tables.	**SE/TE:** 97-99, 598-599, 600-602, 605, 60-607, 608-609, 620-621, 634, 638, 644-645		
d.	Recognize that all first order equations produce linear graphs.	**SE/TE:** 598, 600-603		
e.	Model real-world problems using graphs, tables, equations, manipulatives and pictures and identify extraneous information.	**SE/TE:** 24, 31, 38-39, 40-42, 68, 114, 133, 180, 185, 259, 310, 322, 343, 437-438, 454, 474, 490-491, 498-499, 532, 553, 679, 745, 786-787, 790, 794-795		

STANDARD IV: Students will use algebraic, spatial, and logical reasoning to solve geometry and measurement problems.				
Percentage of coverage in the *student and teacher edition* for Standard IV: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 4.1: Apply the properties of proportionality of different units of measure.				
a.	Convert units of measure within the same system.	**SE/TE:** 206-207, 211, 779, 780, 815		
b.	Create and interpret scale drawings and approximate distance on maps using scale factors.	**SE/TE:** 347, 350, 351-353, 393		
c.	Solve problems using scale factors.	**SE/TE:** 350, 351-353, 393, 402, 448-449, 450-454, 455, 460, 461, 462-463, 486, 807, 808		

Objective 4.2: Derive formulas for surface areas and volume of three-dimensional figures.				
a.	Derive formulas for and calculate surface area and volume of right prisms and cylinders using appropriate units.	**SE/TE:** 179-180, 543-544, 545-547, 552, 554-557, 557-559, 560, 563-566, 568, 571-572, 573, 574-575, 576-577, 626, 720, 810, 816		
b.	Explain that if a scale factor describes how corresponding lengths in two similar objects are related, then the square of the scale factor describes how corresponding areas are related and the cube of the scale factor describes how corresponding volumes are related.	**SE/TE:** 448-449, 450-454, 460-461, 556, 557-558		
c.	Find lengths, areas and volumes of similar figures, using the scale factor.	**SE/TE:** 246, 268-269, 347, 353, 368-369, 450-454, 490-491, 556, 557-559		
d.	Select appropriate two- and three-dimensional figures to model real-world objects, and solve a variety of problems involving surface areas and volumes of cylinders and prisms.	**SE/TE:** 22-23, 547. 552, 556, 558-559, 566, 571-572, 573, 574-575, 576-577		

STANDARD V: Students will use algebraic, spatial and logical reasoning to solve geometry and measurement problems.				
Percentage of coverage in the *student and teacher edition* for Standard V: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard V: N/A %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition (SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries***
Objective 5.1 Calculate probabilities of events and compare theoretical and experimental probability.				
a.	Solve counting problems using the Fundamental Counting Principle.	**SE/TE:** 671-672, 672-674, 679, 706, 709, 812		
b.	Calculate the probability of an event or sequence of events with and without replacement using models.	**SE/TE:** 382-383, 383-386, 387, 392, 393, 396-397, 432, 648, 672-673, 673-674, 684, 685, 687-689, 691, 692-693, 695-696, 697-699, 700, 703, 708, 709, 710-711, 712-713, 807, 812		
c.	Recognize that the sum of the probability of an event and the probability of its complement is equal to one.	**SE/TE:** 383-384, 685, 687-689, 700, 703		
d.	Make approximate predictions using theoretical probability and proportions.	**SE/TE:** 381, 383, 285, 685		
e.	Collect and interpret data to show that as the number of trials increases, experimental probability approaches the theoretical probability.	**SE/TE:** 270-271, 383, 385, 692-693		

Objective 5.2: Formulate questions and answer the questions by organizing and analyzing data.				
a.	Formulate questions that can be answered through data collection and analysis.	**SE/TE:** 270-271, 692-693		
b.	Determine the 25th and 75th percentiles (first and third quartiles) to obtain information about the spread of data.	**SE/TE:** 654-655, 656-658, 705, 709, 812		
c.	Graphically summarize data of a single variable using histograms and box-and whisker plots.	**SE/TE:** 4, 5-7, 24, 654-655, 656-658, 660, 664, 669, 674, 705, 709, 712-713, 812		
d.	Compute the mean and median of a numerical characteristic and relate these values to the histogram of the data.	**SE/TE:** 78, 79-81, 93, 105, 107, 110-111, 270-271, 272-273, 274-278, 279, 284, 285, 288-289, 297, 444, 648, 651-653, 654-655, 656-658, 664, 705, 709, 802, 805, 812		
e.	Use graphical representations and numerical summaries to answer questions and interpret data.	**SE/TE:** 3-4, 5-7, 24, 37, 45, 52-53, 60-61, 71-72, 80-81, 82, 110-111, 137-138, 181, 190-191, 201, 207, 226-227, 228-229, 236-237, 276, 360, 363-364, 384-386, 589, 590-592, 617, 637, 644-645, 646-647, 650, 651-653, 655, 656-658, 659-660, 661-664, 669, 684, 686, 688-689, 700, 704-705, 709, 710-711,712-713, 782, 783, 784		